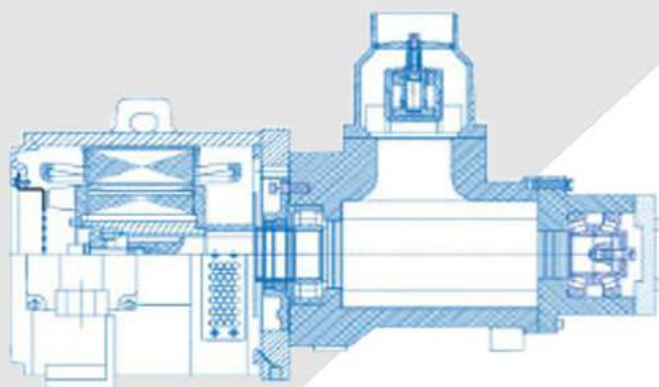


ZLS10i - ZLS200i

7.5kw - 160kw



- Energy Efficiency Level One (China Energy Label)
- Save as much as 50% of the energy
- Protection Grade IP65, the highest protection level in the industry



Oil-cooling pendulous coaxial structure with no bearings (ZLS10i - ZLS100i)

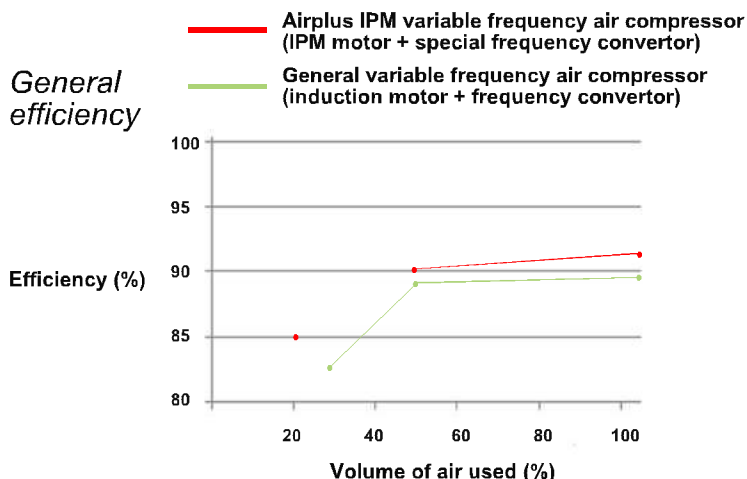
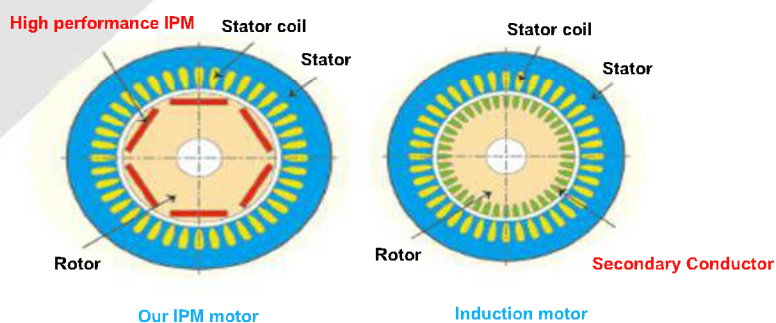
- Fully sealed oil-cooling case
- Pendulous coaxial structure without bearing
- High speed IPM motor

It uses fully sealed oil-cooling case, with highest protection standard of IP65, to totally prevent dust from entering and guarantee that water flushing will cause no harm or damage, maximizing the protection to the permanent magnet's service life. Besides, the motor's cooling oil way is designed with one-way enclosed helix to make sure that cooling accesses to everywhere. Pendulous coaxial structure with no bearings minimizes its transmission loss, improving its transmission efficiency by 2%~5% comparing to belt conveyors and couplers. The application of fully-sealed oil-resistant interior permanent magnet (IPM) high speed motor reduces mechanical wearing greatly.

Interior permanent magnet (IPM) motor

IPM motor, which is a standard equipment, provides much higher efficiency than that of regular and/or high efficient induction motors and meets IE4 standard. Meanwhile, by using high efficient frequency converter, it achieves better energy saving effect than the old ones. Since the bearing temperature of IPM motor is relatively low, its lubricating grease serves a longer time while the workload of motor maintenance is also reduced.

Comparison of structures of IPM motor and induction motor



Why choose Airplus ZLS-i IPM variable-frequency air compressor?

Highly energy saving

- Comparing to non-variable speed screw air compressor, its average energy saving rate can be up to 50%.
- Super air displacement, its frequency is variable from 0Hz to 300Hz and the air displacement can be increased by as much as 28%.
- High efficient motor (IPM), its efficiency is up to 94.5%, reaching the rating of IE4.

Brandy new revolution

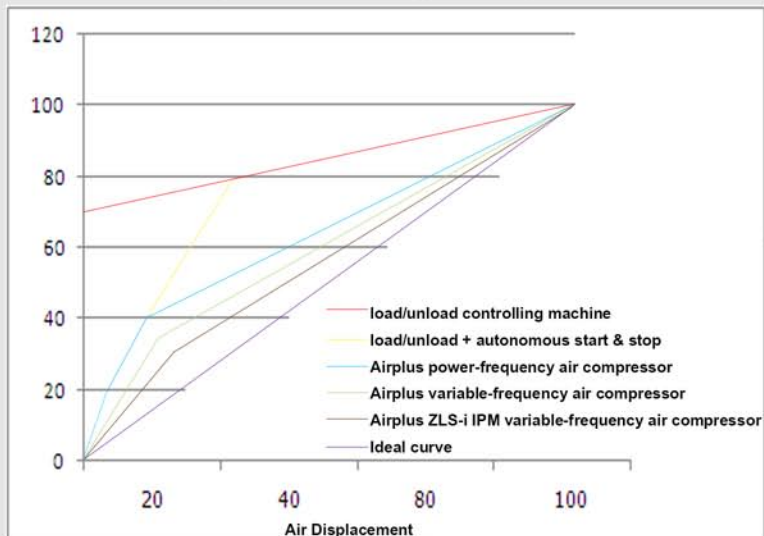
- A brand new revolutionary concept for variable-frequency air compressors; sift out regular ones; best energy saving effect in the industry;
- More compact design, better enclosed body, less noise and smaller;
- Lead to a totally new direction for future air compressors; establish new industrial standards and provide clients with best energy saving solutions.

IPM variable-frequency controlling, better energy saving

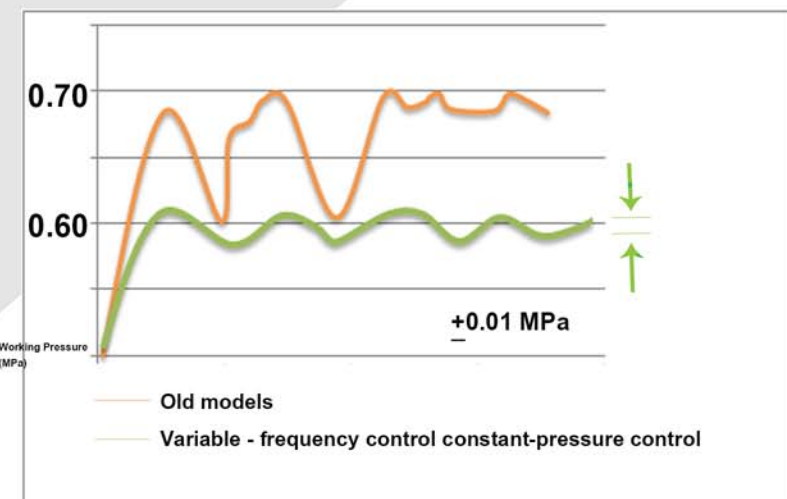
It's able to automatically adjust to optimized and most adequate air volumes during loading in accordance with users exact air consumption situation.

- Constant control of pressure makes the precision of target pressure controlled within $\pm 0.01\text{Mpa}$, and it's able to save 7% of energy with regular variable frequency air compressors and save 50% energy with upload/download controlling machine.
- The motor will stop automatically when air consumption is really low.

Comparison diagram for energy saving effect



Realize energy saving with constant pressure control



Highly reliable

- Years of continuous tests guarantee extreme reliabilities of IPM variable frequency compressors.
- Protection grade IP65, fully-sealed oil-cooling case to completely prevent dust and/or liquid from entering.
- Optimal configuration allows customers to purchase cheapest maintenance parts.



Protection grade IP65

- Control principle : Regular power-frequency air compressors use intake valves to adjust air displacement needs while variable frequency air compressors and IPM variable frequency air compressors adjust air displacement needs via motors with variable frequency, and the comparison between their differences on energy saving is as follows.

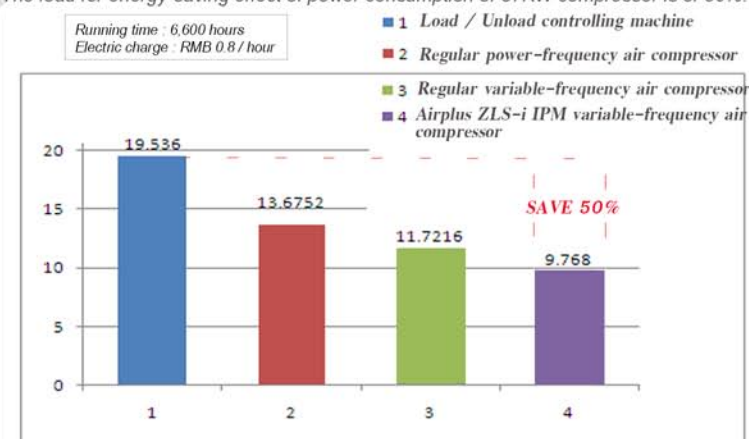
- Assumptions : Taking 37KW for example, with working time of 6,600 hours annually and average load of 50% and electricity fee of RMB 0.8/KW/h, power-frequency air compressors use general settings while variable frequency and/or IMP air compressors can be set to run at the lowest frequency and be set to be in standby mode after 0 minute.

- Calculation of energy conservation : Energy consumption while idling + energy consumption during operation

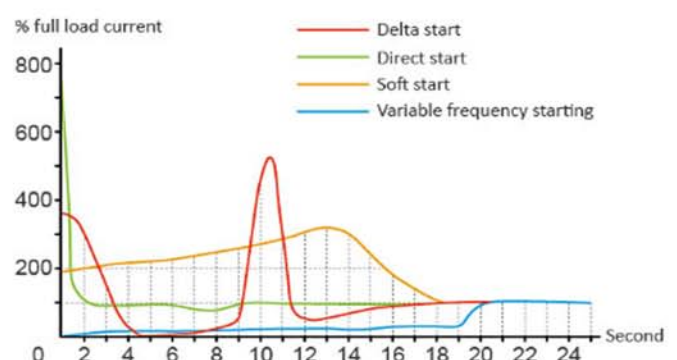
	Load / Unload controlling machine	Regular power-frequency air compressor	Regular variable-frequency air compressor	Airplus ZLS-i IPM variable-frequency air compressor
Total yearly electric charge (RMB 10,000)	19.536	13.6752	11.7216	9.768

The load for energy-saving effect of power consumption of 37KW compressor is of 50%.

Running time : 6,600 hours
Electric charge : RMB 0.8 / hour



Soft start of frequency converter reduces starting current





- ① Operation panel
- ② Emergency stop button
- ③ Oil-air separation barrel
- ④ IPM frequency converter
- ⑤ Cooling fan
- ⑥ Oil filter
- ⑦ Screw air end
- ⑧ IPM motor
- ⑨ Air filter
- ⑩ Oil cooler



Special driver for IPM frequency conversion



- Modularized design for easy maintenance and extension.
- Built-in Modbus, RS485 and RS232 serial communications to satisfy multiple needs of users.
- Long service-life design and life detection for important parts.
- PCB coating to reinforce environmental tolerance.
- With supreme thermal dissipation design, its operating ambient temperature can be 50°C and the automatic output rating adjustment based on temperature rise condition can ensure the continuous and highly efficient operation of frequency converter.

Technical Data Sheet

Model		Mpa	ZLS10i	ZLS15i	ZLS20i	ZLS30i	ZLS40i	ZLS50i	ZLS60i	ZLS75i	ZLS100i	ZLS125i	ZLS150i	ZLS175i	ZLS 200i	
Max air displacement/ discharge pressure m3/min		0.75	1.59	2.37	3.26	4.5	6.1	7.3	8.7	12.1	15.8	19	24.8	26.7	30.1	
		0.85	1.56	2.34	3.01	4	5.6	6.8	7.8	10.5	14.1	16.2	23.2	25.3	29.7	
		1	1.30	1.96	2.6	3.61	5.12	5.8	7.1	8.6	12.3	14.1	20.1	23	26.95	
Working Mode of Cooler		Air cooling/water cooling														
Discharge Temperature		℃	Air cooling < environmental temperature +8 ℃, water cooling <40 ℃													
Volume of lubricating oil		L	10	10	10	11	13	18	25	25	60	60	70	94	94	
Noise		dB(A) *	61±2	61±2	62±2	64±2	64±2	64±2	65±2	65±2	66±2	66±2	67±2	67±2	70±2	
Motor	Power	KW/HP	7.5/10	11/15	15/20	22/30	30/40	37/50	45/60	55/75	75/100	90/125	110/150	132/175	160/200HP	
	Start mode	Variable frequency starting														
	Drive mode	Direct-driven, coaxial										Direct driven				
	Voltage	V	220V, 380V, 415V, 440V, 460V													
	Frequency	Hz	50HZ, 60HZ													
Dimension	Length	mm	1000	1200	1200	1350	1400	1500	1550	1700	1850	2050	2260	2750	2750	
	Width	mm	700	800	800	850	850	900	1000	1150	1250	1300	1660	1760	1760	
	Height	mm	1140	1160	1160	1200	1350	1350	1480	1530	1500	1700	1800	1850	1850	
Weight		Kg	300	370	370	410	540	650	800	1000	1300	1450	2100	2400	2890	
Caliber of Air-vent		inch	1"	1"	1"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	2"	2"	2"	2-1/2"	3"	3"	
Caliber of cooling nozzle		inch		3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1-1/2"	1-1/2"	1-1/3"	1-1/4"	1-1/2"	
Discharge of cooling water		L/min		60	60	80	80	80	200	200	200	200	200	300	300	

Specification is subject to change without notice due to improvement for excellence